Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Implementation of Sections 309(j) and 337	)	WT Docket No. 99-87
of the Communications Act of 1934, as Amended	)	
	)	
Promotion of Spectrum Efficient Technologies on	)	RM-9332
Certain Part 90 Frequencies	)	

PETITION TO DEFER ENFORCEMENT OF SECTION 90.203(j)(5) OF THE COMMISSION'S RULES

EFJohnson Company, Kenwood U.S.A. Corporation, and Motorola, Inc., (collectively, "Joint Petitioners")[1] hereby requests that the Commission defer enforcement of Section 90.203(j)(5)[2] of the Commission's rules, which requires new applications for equipment authorizations in the 150-174 MHz ("150 MHz") and 421-512 MHz ("450 MHz") bands (collectively, "Refarming bands") submitted on or after January 1, 2005 to specify 6.25 kHz capability. Section 90.203(j)(5) was instituted as a means to encourage the transition to narrowband technologies in the Refarming bands through the equipment authorization process. The Commission has already determined, however, that this approach has proven to be ineffective at achieving that goal.[3] The Commission should, therefore, eliminate this Section as

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[1] The Joint Petitioners represent manufacturers supplying a significant majority share of the private land mobile radios ("PLMR"), products, systems and services to every type of eligible users in this country.

[2] Should the Commission believe that a stay or waiver of Section 90.203(j)(5) is the more appropriate relief consistent with this request, the Joint Petitioners will modify this pleading immediately upon such notification.

[3] *See In the Matter of Implementation of Sections 309(j) and 337 of the Communications Act of 1934 as Amended; Promotion of Spectrum Efficient Technologies on Certain Part 90 Frequencies, Second Report and Order and Second Further Notice of Proposed Rulemaking*, 18 FCC Rcd 3034 (2003) ("*Second Report and Order*" or "*Second Further Notice*") at ¶12.

it considers further action to the pending *Second Further* Notice. Should the Commission choose to retain this Section, given the current state of the private land mobile radio services market and the relevant regulatory environment, enforcement of it would be premature and would place excessive burdens on manufacturers and impose unnecessary costs on licensees, including public safety agencies. Hence, the Commission should defer enforcement of this Section's provisions for at least two years.

I. BACKGROUND.

In 1991, the Commission initiated its *Refarming* proceeding to address the growing congestion in the private land mobile radio ("PLMR") bands below 800 MHz.[4] The goals of that proceeding was to increase channel capacity in the these bands, promote more efficient use of those channels, and simplify the Commission's rules governing these bands, without imposing unreasonable burdens on present or future licensees.[5] To help achieve these goals, the Commission established a narrowband channel plan based on the existing channel centers and managed the transition to narrowband technology by authorizing only increasingly efficient equipment over a ten-year period.[6] Specifically, after August 1, 1996, the Commission would certify only equipment capable of operating with a 12.5 kHz or less channel bandwidth. After January 1, 2005, the Commission would certify only equipment that is capable of operating with

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[4] *Spectrum Efficiency in the Private Land Mobile Radio Bands in Use Prior to 1968, Notice of Inquiry*, 6 FCC Rcd 4126 (1991).

[5] *Replacement of Part 90 by Part 88 to revise the Private Land Mobile Radio Services and Modify the Policies Governing Them, Notice of Proposed Rulemaking*, 7 FCC Rcd 8105, ¶¶ 1, 6 (1992).

[6] *Replacement of Part 90 by Part 88 to Revise the Private Land Mobile Radio Services and Modify the Policies Governing Them and Examination of Exclusivity and Frequency Assignment Policies of the Private Land Mobile Radio Services, Report and Order and Further Notice of Proposed Rulemaking*, 10 FCC Rcd 10076, ¶ 7 (1995) ("*Refarming Report and Order*").

a 6.25 kHz or less channel bandwidth.[7] Equivalent efficiency technologies would also be allowed.[8] At that time, the Commission believed "it [was] reasonable to expect manufacturers to produce 6.25 kHz equipment in the Refarming bands within ten years."[9] The Commission also found this flexible approach to narrowbanding the private land mobile radio bands to be the most appropriate approach, because it allowed the market, as opposed to regulation, to control the transition to narrowband technology.[10]

This approach has proven to be inadequate. Therefore, the Commission subsequently adopted a set end-date and various interim deadlines to expedite this transition.[11] Specifically the Commission mandated that:

- Six months after Federal Register publication of the *Second Report and Order*, no applications for new or expanded operations using 25 kHz channels in the 150-174 MHz or 421-512 MHz bands would be permitted;[12]

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7 *Id.*

8 The Commission, without explanation, recently eliminated the allowance for equivalent efficiency technologies. *Second Report and Order* at Appendix B page 33. This elimination was the subject of multiple Petitions for Reconsideration of the Commission's *Second Report and Order*. *See, e.g., Petition for Reconsideration and Clarification of Motorola, Inc.*, WT Docket No. 99-87 (filed Aug. 18, 2003). If the Commission decides to retain the policies contained within Section 90.203(j)(5), it is essential that the Commission reconsider the equivalent efficiency issue. For at least the foreseeable future, 6.25 kHz technologies will not be sufficiently evolved to be cost-effective, which has driven all product development to focus on equivalent efficiency technologies designed to operate over bandwidths larger than 6.25 kHz. Unless the FCC continues to accept equivalent efficiency designs for satisfying the spectrum efficiency requirements, years of product development and standards work will be wasted.

9 *Refarming Report and Order* at ¶ 39. This expectation has turned out to be overzealous. Although the industry is nearing the end of this ten-year transition, a workable standard for these technologies has not yet been adopted, much less implemented.

10 *Id.* at ¶ 37.

11 *Second Report and Order* at ¶ 12. The Commission adopted similar interim deadlines and set end-dates for the transition to narrowband technologies in the 700 MHz band. *The Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Agency Communication Requirements Through the Year 2010, Fifth Report and Order*, 17 FCC Rcd 14999, ¶ 2 (2002) ("*700 MHz Report and Order*").

- Certification of any new equipment capable of operating at one voice path per 25 kHz of spectrum would no longer be permitted after January 1, 2005;

- Equipment capable of operating at one voice path per 25 kHz of spectrum could not be manufactured or imported after January 1, 2008;

- Non-public safety licensees using channels in these bands will be required to deploy technology that achieves the equivalent of one voice path per 12.5 kHz of spectrum by January 1, 2013; and

- Public safety licensees using channels in these bands will be required to deploy technology that achieves the equivalent of one voice path per 12.5 kHz of spectrum by January 1, 2018.

In implementing these deadlines, the Commission found that the prior equipment approach was ineffective in facilitating the transition to narrowband technologies.[13] Concurrent with this decision, the Commission released the *Second* Further *Notice* seeking comment on whether it should establish a similar transition plan for 6.25 kHz technologies.[14]

Although several decisions have been made, the PLMR industry is still in a state of regulatory flux regarding the transition to narrowband technologies in the 150-174 MHz or 421-512 MHz bands. Multiple Petitions for Reconsideration were filed in response to the Commission's *Second Report and Order*. Although most commenters applauded the Commission's commitment to facilitating a transition to narrowband technologies by establishing a date-certain for the end of the transition, many of these same commenters urged

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[12] The FCC has stayed this date until it resolves the petitions for reconsideration filed in this proceeding. *See Order*, WT Docket No. 99-87, FCC 03-306 (rel. Dec. 3, 2003).

[13] *Second Report and Order* at ¶ 12 ("We agree with the majority of commenters that our current approach to encourage spectral efficiency in the PLMRS bands, based on the equipment certification process, is not by itself sufficient to bring about a timely transition to narrowband technology; thus, we conclude that stronger action is required").

[14] *Second Further Notice* at ¶ 27.

the Commission to reconsider its decision to establish interim deadlines.[15] These commenters found the interim deadlines to be constricting and unnecessary in today's marketplace. Similarly, in response to the Commission's *Second Further Notice*, many commenters suggested that the establishment of a transition plan to 6.25 kHz technologies at this stage would be premature, given the currently nascent nature of these technologies and the absence of a workable standard for 6.25 kHz equivalent efficiency technologies.[16]

II. THE COMMISSION SHOULD ELIMINATE SECTION 90.203(j)(5).

In the Commission's experience, relying solely on the equipment authorization process as a means to transition the PLMR industry to narrowband technologies has proven to be ineffective.[17] Eight years after its adoption, the Commission found that very little progress had been made in the transition to narrowband technologies and therefore instituted a date-certain for

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[15] *See e.g.* Requests for Clarification and Reconsideration and Comments on the Second Further Notice of Proposed Rulemaking of the National Telecommunications and Information Administration, (August 13, 2003); Petition for Reconsideration of The American Mobile Telecommunications Association; The Industrial Telecommunications Association; and PCIA-The Wireless Infrastructure Association, (August 18, 2003); Petition for Reconsideration, The American Petroleum Institute and the United Telecom Council, (August 18, 2003); Petition for Reconsideration, The Association of American Railroads, (August 18, 2003); Petition for Reconsideration, The Association of Public-Safety Communications Officials-International, Inc., the International Association of Fire Chiefs, Inc. and the International Municipal Signal Association, the International Association of Chiefs of Police, Major Cities Chiefs Association, National Sheriffs' Association, Major County Sheriffs' Association, and the National Public Safety Telecommunications Council, (August 18, 2003); Petition for Reconsideration, The Private Wireless Mining Coalition, (August 18, 2003) (all filed in WT Docket No. 99-87).

[16] *See e.g.*, Reply Comments Of The Land Mobile Communications Council (October 15, 2003); Comments of Industrial Telecommunications Association, (September 15, 2003); Comments of Motorola, (September 15, 2003), Comments Of Tait North America, Inc. (September 15, 2003); Comments of The Association of Public-Safety Communications Officials-International, Inc., the International Association of Fire Chiefs, Inc. and the International Municipal Signal Association, the International Association of Chiefs of Police, Major Cities Chiefs Association, National Sheriffs' Association, Major County Sheriffs' Association, and the National Public Safety Telecommunications Council, (September 15, 2003) (all filed in WT Docket No. 99-87).

[17] *See* n. 13 *supra.*

the end of the transition to 12.5 kHz technologies.[18] The Commission found that although 12.5 kHz technologies have been certified and available for some time, this technology is only now beginning to be deployed and used by the PLMR industry. As a practical matter and for many reasons, the transition to more efficient equipment has taken and will continue to take more time that originally contemplated. Accordingly, enforcement of Section 90.203(j)(5) would only impose significant burdens on manufacturers while serving no achievable purpose.

III. ENFORCEMENT OF SECTION 90.203(j)(5) EFFECTIVE JANUARY 1, 2005 WOULD BE PREMATURE AND IMPOSE SIGNIFICANT COSTS ON MANUFACTURERS AND LICENSEES WITH LITTLE RESULTANT GAIN IN SPECTRUM EFFICIENCY.

Despite the fact that the Commission originally adopted this requirement in 1995, the premature nature of the Commission's original ruling was such that the private wireless community, and more specifically public safety, has yet to finalize industry developed workable technical standards for 6.25 kHz equivalent efficiency technology. Interoperability and compatibility among 6.25 kHz equivalent technologies are essential to the effective operation of land mobile radio services for federal, state and local public safety organizations/ agencies, and critical infrastructure entities. The lack of a completed 6.25 kHz equivalent efficiency standard will likely result in manufacturers developing and users implementing multiple 6.25 kHz technologies, further exacerbating the inability of public safety organizations to communicate with each other. The Commission itself has acknowledged the importance of interoperability and compatibility in narrowband technologies.[19] For this reason, manufacturers cannot develop and deploy 6.25 kHz equivalent technologies until these standards are completed.

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18 *Second Report and Order* at ¶ 2.

19 *Refarming Report and Order* at ¶ 39.

The industry is actively working towards developing standards for 6.25 kHz equivalent efficiency technologies. Specifically, Project 25, an industry steering committee established by the Association of Public Safety Communications Officials International, the National Association of State Telecommunications Directors, selected Federal Agencies, and the National Communications System to develop voluntary common system standards for digital public safety radio communications, is currently drafting Project 25 (P25) Phase 2 standards documents.[20] When completed, upwards of forty documents will define a two-slot TDMA technology that will operate in a 12.5 kHz bandwidth and require backward compatibility with P25 Phase 1 standards, which defined FDMA technology operating in 25 kHz and 12.5 kHz bandwidth. Although this standardization project was initiated in January of 2002, complete system standardization efforts typically take three to five years to complete. This process, therefore, will not be complete until at least mid-2005.

Forcing manufacturers to incorporate 6.25 kHz equivalent efficiency capabilities prior to the adoption of an industry standard exposes manufacturers to the risk of remanufacturing and redesign costs to satisfy subsequent new standards. This will ultimately place unnecessary additional cost burdens on licensees. Enforcement of Section 90.203(j)(5), effective January 1, 2005, would force manufacturers to begin development and deployment of 6.25 kHz technologies prior to adoption of a 6.25 kHz equivalent efficiency standard for the sole purpose of complying with the Commission's rules. Manufacturers would then have to (1) develop and deploy a second 6.25 kHz technology, (2) implement potentially substantial changes to their chosen technology so it will be compliant with the P25 Phase 2 standards that Project 25

[20] These standards are being developed under the terms of the Joint Memorandum of Agreement between the Project 25 Steering Committee and Committee TR-8 of the Telecommunications Industry Association, which was organized for the development of mobile and personal private radio standards.

ultimately adopts, or (3) continue to offer only original non-Project 25 compliant 6.25 kHz technology. The latter choice is clearly not in the public interest because it will inhibit interoperability, resulting in the continued inability of various public safety agencies to effectively communicate with each other. Redevelopment, furthermore, is a waste of manufacturers' limited resources. End-users will ultimately bear the costs of this redevelopment. Instead, manufacturers and end users should be applying their limited funding to the implementation and deployment of proven 12.5 kHz technologies. Once a 6.25 kHz equivalent efficiency standard is completed and adopted, the manufacturing industry will need approximately 18 months to develop and deploy 6.25 kHz technologies.

Furthermore, the introduction of 6.25 kHz technologies at this time is unlikely to have any impact on the efficient use of this spectrum. Most operations in these bands continue to operate at bandwidths of 20 kHz and 25 kHz. These continued wideband operations leave little spectrum available for new operations that could potentially use 6.25 kHz channels. Although the FCC has recently adopted a transition plan for the mandatory use of 12.5 kHz equipment, that decision authorized the continued operation of wideband technologies until 2013 for non-public safety operations and 2018 for public safety operations.[21] It is, therefore, very unlikely that any of this spectrum will become available for new uses in the near future. Hence, even if the Commission decides to reduce this transition time on reconsideration, we are still years away from 6.25 kHz technologies having any meaningful impact on improving spectral efficiency in these bands.

We note that in WT Docket 96-86, the Commission recently adopted a requirement that equipment designed for 700 MHz public safety operations be 6.25 kHz, or equivalent efficiency,

[21] *Second Report and Order* at ¶

capable by January 1, 2007.[22] In contrast to the 150 MHz and 450 MHz bands, the 700 MHz band is virgin spectrum for land mobile services thus providing a simpler environment in which to deploy new technologies. Yet seven years after the Commission's *Reframing Report and Order*, the Commission decided that the transition date for 6.25 kHz equipment in the 700 MHz band should be two years later than in the heavily used Refarming bands. This anomaly does not reflect marketplace realities and, therefore, the Joint Petitioners urge the Commission to align the equipment certification deadline for 6.25 kHz technologies in the 150 MHz and 450 MHz bands with the January 1, 2007, equipment certification deadline for 6.25 kHz technologies in the 700 MHz band. Aligning these deadlines will provide manufacturers with economies of scale that would help facilitate the development of affordable 6.25 kHz technologies. A deadline of January 1, 2007 should also provide Project 25 sufficient time to complete their 6.25 kHz equivalent efficiency standards and manufacturers adequate time to develop and deploy standardized 6.25 kHz technologies.

IV. AT A MINIMUM, THE COMMISSION SHOULD DEFER ENFORCEMENT OF THIS SECTION UNTIL IT COMPLETES ITS COMPREHENSIVE REVIEW OF THE TRANSITION TO 6.25 KHZ TECHNOLOGIES.

The transition to 6.25 kHz technology is the subject of further regulatory proceedings in WT Docket 99-87. In this proceeding, the Commission is considering the establishment of various deadlines for the transition to 6.25 kHz technologies.[23] Several commenters have argued that the status of this technology is such that the FCC should not adopt a date-certain for the

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[22] *700 MHz Report and Order* at ¶ 2. At the same time, the Commission adopted a comprehensive transition plan to 6.25 kHz technologies in the 700 MHz band, with the date-certain for the end of the transition being December 31, 2016. *Id.* Given that the end-date for the transition to 12.5 kHz technologies in the Refarming bands is January 1, 2018, the end-date for the 700 MHz band is much earlier than any end-date the Commission could establish for the transition to 6.25 kHz technologies in the Refarming bands.

[23] *Second Further Notice* at ¶ 27.

mandatory transition to 6.25 kHz and should reconsider the 2005 deadline altogether.[24] There is substantial support in the record for these positions, including illustrations that the likely timeframe for such a transition is currently well beyond anyone's ability to predict. Furthermore, enforcement of this Section and its January 1, 2005 deadline could result in an extensive timeframe under which manufacturers are forced to comply with this certification requirement without receiving any financial reimbursement for their investment because the market for 6.25 kHz technologies has not sufficiently evolved. The Commission should not prejudice this decision by enforcing Section 90.203(j)(5) on January 1, 2005. Instead, the Commission should defer implementation of this policy pending the outcome of this rulemaking.

V. CONCLUSION.

The regulatory environment surrounding narrowbanding and the technological development of 6.25 kHz, and equivalent efficiency, technologies are currently in a state of flux. The Commission's previous method for encouraging the transition to narrowband technologies has been proven ineffective, and it is now considering the establishment of a new transition plan for 6.25 kHz technologies. Moreover, the PLMR industry is still in the process of developing standards for 6.25 kHz equivalent efficiency technologies. Given these realities, enforcement of Section 90.203(j)(5), effective January 1, 2005, would result in significant burdens on the manufacturing industry and ultimately impose costs on PMLR users, including public safety,

[24] *See, e.g., Comments of Motorola*, WT Docket No. 99-87, at 5, 1 (filed Sept. 15, 2003); *Reply Comments of the Land Mobile Communications Council*, WT Docket No. 99-87, at 3 (filed October 15, 2003); *Comments of Tait North America, Inc. In Response To Second Further Notice of Proposed Rulemaking*, WT Docket No. 99-87, at 3-6 (filed September 15, 2003); *Comments In Response To Second Further Notice of Proposed Rulemaking -- The Association of Public-Safety Communications Officials-International, Inc. ("APCO"), The International Association of Fire Chiefs, Inc., and The International Municipal Signal Association ("IAFC/IMSA"), International Association of Chiefs of Police ("IACP"), Major Cities Chiefs Association ("MCCA"), National Sheriffs' Association ("NSA"), Major County Sheriffs' Association ("MCSA"), and The National Public Safety Telecommunications Council ("NPSTC")*, WT Docket No. 99-87, at 2 (filed September 15, 2003) .

without the accompanying gain in facilitating the transition to 6.25 kHz technologies. The Commission should, therefore, eliminate this Section or at least defer enforcement of it until both the industry has had the opportunity to establish and implement 6.25 kHz technology standards and the Commission has resolved the outstanding issues regarding the 6.25 kHz technology transition.

Respectfully submitted,

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